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Mu2e Computing Status Report to SCD

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SCD Projects Meeting
Mar 4, 2021

Mu2e IPR: Feb 23-25

- Closeout report
 - “Recommend re-baselining once a credible plan for completing the DS/PS solenoids is available ...”
 - Otherwise very positive
- Head’s up: recommendation from the Detector section
 - “Continue the enhancement of firmware development with the addition of staff who can establish institutional memory of the firmware solutions.”
 - My translation:
 - “Firmware”:
 - In DAQ chain ***upstream of existing Fermilab responsibilities***
 - Developers: non-permanent people (post docs, grad students ...)
 - “Staff”:
 - Permanent people and succession planning

Major Efforts Underway

- Tracker Vertical Slice test
 - First data imminent
 - (Old Fermi) FTS deployed and tested. Thanks!
 - Next step: set up a POMS job to process files as they arrive.
- Next major simulation campaign
 - Goal: produce a mis-calibrated and mis-aligned dataset to study algorithms for calibration and alignment
 - R&D nearing completion.
 - Event Mixing jobs now run in 2 GB (down from 6 or 8)!
 - Main G4 jobs run in 2+ a little GB
 - Startup is imminent
 - Expect a few Mhours using Fermigrid and OSG

G4 v4_10_7_p01a

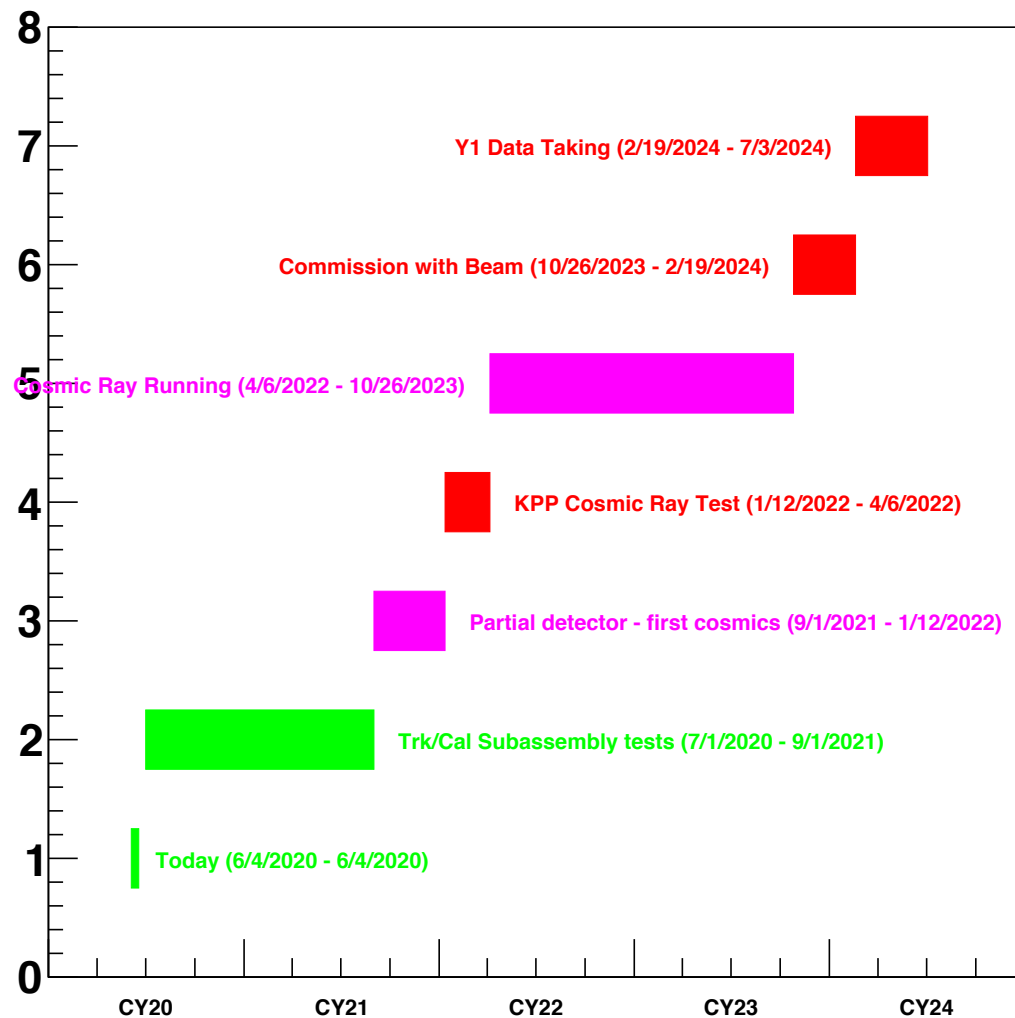
- Failed our validation suite
 - Yield of stopped muons dropped by a factor of ~ 2
 - Other metrics look good
- Krzysztof just sent email saying this may be fixed!
 - Waiting for details Thanks!
 - Will rerun our validation suite.
- Under investigation:
 - Mu2e
 - Rerunning some jobs with output dialed up to 11
 - G4 group in PDS:
 - They are still running their validation plots for this release
 - Krzysztof tells me to expect results early next week

What Else is Underway

- Collaboration Meeting March 8 – 13
- Support evolving TDAQ development work
 - Algorithms, data formats and workflow.
- R&D towards operations of the full detector
- Development of Eve7 based event display
- Smaller projects:
 - Ongoing work to update all physics sensitivity numbers
 - Support Mu2e-II work for Snowmass: paused for now.

Backup Slides

Pre-Covid Rough Schedule - provided for reference



- Takeaways:
- First cosmic rays: fall 2021
- First beam: fall 2023
- First physics data Feb 2024